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July 14, 1995

VIA FEDERAL EXPRESS

Mr. Lance Richman
U.S. Environmental Protection Agency
290 Broadway, 19th Floor
Room W-20
New York, New York 10007-1866

Re: Sources of Hazardous Substances in the Passaic River Study Area: Ashland Chemical Company

Dear Lance:

As I have discussed with Patricia Hick, enclosed please find a memorandum commenting on the response of Ashland Chemical Company to the EPA's request for information under Section 104(e) of the Comprehensive Environmental Response, Compensation, and Liability Act. The memorandum is accompanied by a number of documents, indexed and bound for your ready reference.

Please do not hesitate to contact me if you or any members of your team have questions or comments. We look forward to working with you.

Very truly yours,

Amanda G. Birrell / w permission

Amanda G. Birrell

Enclosures

cc: Ms. Patricia C. Hick
Mr. Gerald R. Connolly

MEMORANDUM

July 14, 1995

TO: Lance Richman

FROM: Maxus Energy Corporation Responding on Behalf of Occidental Chemical Corporation

RE: Ashland Chemical Company

PURPOSE AND SCOPE

This memorandum presents evidence that Ashland Chemical Company ("Ashland") is a Potentially Responsible Party ("PRP") for the Passaic River Study Area within the meaning of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"). This memorandum also comments on Ashland's response (the "Response") to EPA's Request for Information under § 104(e) of CERCLA.

Specifically, documents demonstrate that:

- Ashland has stored or used hazardous substances at its facility on 221 Foundry Street in Newark, New Jersey since 1968, including maleic anhydride, o-dichlorobenzene, chlorobenzene, phthalic anhydride, p-dichlorobenzene, methylene chloride, and xylene.

- Ashland directly discharged hazardous substances to the Passaic River from catch basins at the Foundry facility which discharged to the Roanoke Avenue combined sewer outfall.

- Runoff from contaminated soils at the Foundry facility discharged to the Passaic River through the Roanoke Avenue combined sewer outfall.

- Ashland discharged process waste to the sanitary sewer from the Foundry facility which discharged to the Passaic River through the Roanoke Avenue combined sewer outfall.

- Hazardous substances like those used on the Foundry facility and discovered in the soil and ground water on the property were found in River sediments adjacent to the Roanoke Avenue combined sewer outfall.

- Ashland has stored or used hazardous substances at its facility at 400 Doremus Avenue in Newark, New Jersey from 1968 to 1978, including phthalic anhydride, maleic anhydride, fumeric anhydride, xylene, and toluene.

- Ashland directly discharged hazardous substances to the Passaic River from the Doremus facility via spills and leaks and discharges to an on-site storm sewer and contaminated storm water runoff from the facility also discharged to the Passaic River.

The tables attached at Tab A summarize in general the facts demonstrating the liability of Ashland for hazardous substances in the Passaic River Study Area from its Foundry Street and Doremus Avenue facilities.

CONCLUSION

1. EPA should immediately notify Ashland that it is a PRP for the Passaic River Study Area because public documents collected by Maxus and attached to this memorandum demonstrate that Ashland arranged for the disposal of hazardous substances to the Passaic River Study Area.

2. If the agency wishes to collect additional information, the agency can insist that Ashland provide the various documents referred to in its Response, and the agency can confront Ashland with the information the agency already possesses.

I. Ashland is a PRP for the Passaic River Study Area

A. Foundry Street

From 1968 to 1990, Ashland owned and operated the facility located at 221 Foundry Street in Newark, New Jersey. Ashland received and stored a wide range of specialty chemicals at this facility. These chemicals were repackaged into smaller bulk lots for distribution. In addition, Ashland also processed and blended solvent mixtures at the facility. In the course of its operations, Ashland **stored or utilized on the property hazardous substances including maleic anhydride, phthalic anhydride, o-dichlorobenzene, chlorobenzene, p-dichlorobenzene (all dioxin precursors), bis (2 ethyl hexyl) phthalate and di-n-octyl phthalate**. *See* documents attached at Tab B which include a 1979 Tank Listing and a Resource Conservation Recovery Information System Report. In addition, Ashland's **Response states that methylene chloride, methyl ethyl ketone, benzene, ethyl benzene, toluene and xylene were received or utilized on site.** Response at p. 2.

Although Ashland's Response states that there were no discharges to the Passaic River from the Foundry facility, public documents demonstrate that several pathways

existed for contamination and hazardous substances utilized at the Ashland Foundry facility to be discharged to the Passaic River.

First, Ashland **directly discharged to the Passaic River through the Roanoke Avenue combined sewer outfall.** The 1971 PVSC Annual Report documents the discharge of highly polluting flammable and explosive materials from Ashland to the Roanoke Avenue combined sewer which discharged to the Passaic River. *See* Excerpt from 1971 PVSC Annual Report attached at Tab C. In addition, a 1976 PVSC letter notes spills from the tank truck cleaning area which flowed to catch basins on the Ashland property which discharged to the Roanoke Avenue combined sewer. *See* Letter from PVSC attached at Tab D. In 1983, the New Jersey Department of Environmental Protection documented that neutralized waste product from acid drumming operations at the facility was disposed of through the PVSC sewer line. *See* 1983 New Jersey Department of Environmental Protection Inspection Report attached at Tab E.

Contaminated storm water and surface water runoff. Documents submitted by Ashland along with its Response confirm that soils at this Ashland facility are contaminated with numerous hazardous substances including ethyl benzene, toluene, methylene chloride, xylene, and trichloroethane. *See* Response, T.M. Gates Sampling Findings, Former Ashland Chemical Company IC&S Facility. Groundwater at the Foundry facility is also contaminated with hazardous substances including benzene, xylene, toluene, methylene chloride, and ethyl benzene. *See* Response, Groundwater Technology Progress Report. In addition, sampling performed as part of Ashland's Environmental Cleanup Responsibility Act investigation confirms that the **soils and groundwater are also contaminated with chlorobenzene, 1,3 dichlorobenzene, 1,4 dichlorobenzene, 1,2 dichlorobenzene, phenanthrene, fluoranthene, bis(2 ethyl hexyl) phthalate and a variety of other hazardous substances**. *See* Excerpts from Groundwater Technology Reports and T.M. Gates Reports attached at Tab F. Ashland's poor housekeeping practices caused contamination of the soil and groundwater. For example, condensate and washed out solvent frequently spilled to the ground. *See* Excerpt from PVSC Bi-Monthly Report attached at Tab G. In addition, in 1979, 3,000 gallons of fuel oil were spilled onto the property. *See* Excerpt from T.M. Gates Report, p. 15 attached at Tab H. As a result of these activities, contaminated storm water and surface water runoff from the Ashland facility discharged to the Passaic River through the Roanoke Avenue combined sewer outfall. *See* Excerpt from Groundwater Technology Report attached at Tab I. In addition, during storm events, water accumulated at the site and would subsequently discharge to the storm sewers. *See* Excerpt from T.M. Gates Report, pp. 21, 40 attached at Tab H.

Bypassing to Passaic River. Ashland's Response denies that wastes from the Foundry facility were discharged to the sanitary sewer. However, documents indicate that this is simply not the case. In 1971, the PVSC issued a written warning to Ashland against discharging waste to the sanitary sewer without proper pretreatment. *See* Excerpt from 1971 PVSC Annual Report attached at Tab C. In addition, acid drumming wastes and line flushing wastes were disposed of into the sanitary sewer. *See* Excerpt from T.M. Gates Report, p. 14 attached at Tab H. Waste waters discharged to the

sanitary sewer system would discharge to the Passaic River through the Roanoke Avenue combined sewer outfall.[1] Moreover, for many years, the Foundry facility had an under drain system to collect contaminated groundwater which was treated only with an oil water separator before being discharged to the PVSC sewer. *See* Excerpt from T.M. Gates Report, p. 16 attached at Tab H. Thus, groundwater contaminated with the numerous hazardous substances discussed above was directly discharged to the Passaic River from the Foundry facility.

Passaic River sediments reflect the discharges of Ashland. Sample cores taken adjacent to the Foundry facility at various depths contain substantial concentrations of hazardous substances. Below is a brief table depicting the concentrations of several of the substances and the substances connection to the Foundry facility.

Hazardous Substances in Passaic River Sediments Adjacent to Roanoke CSO	**Connection to Foundry Street Facility**
p-dichlorobenzene (1,300 ug/kg)	Stored or used on site
o-dichlorobenzene (430 ug/kg)	Stored or used on site
phenanthrene (280,000 ug/kg)	Found in soils on site
fluoranthene (180,000 ug/kg)	Found in soils on site
di-n-octyl phthalate (170,000 ug/kg)	Stored or used on site
bis (2 ethyl hexyl) phthalate (150,000 ug/kg)	Stored or used on site and found in soils on site
di-n-butyl phthalate (38,000 ug/kg)	Stored or used on site and found in soils on site
xylene (2,500 ug/kg)	Stored or used on site and found in soil and groundwater on site

In addition, the table attached at Tab A lists additional hazardous substances found in the soil and ground water at the Ashland Foundry facility or known to have

[1] *See* Affidavit of Seymour Lubetkin submitted to EPA with the *Report on Industrial Waste Streams Bypassed to the Passaic River* in August 1994. In addition, excerpts from PVSC Annual Reports and other PVSC documents, submitted to EPA in July 1993, frequently documented industrial waste in the sanitary sewer overflowing to the Roanoke storm sewer outfall and thence the Passaic River. The documents specifically stated that, for a period of time, a faulty regulator existed at the Roanoke Avenue combined sewer outfall resulting in all sewage flows being discharged untreated to the Passaic River.

been stored or used by Ashland at the property that were identified in sediment samples adjacent to the Roanoke Avenue combined sewer outfall.

B. Doremus Avenue

In addition to the Foundry facility, from 1967 to 1978, Ashland also operated a facility at 400 Doremus Avenue in Newark, New Jersey. At this facility, Ashland manufactured specialty chemical products including alkyd resins, plasticizers and polyesters. In the course of its operations, **Ashland received or utilized on the property hazardous substances including toluene, xylene, phthalic anhydride, copper, and zinc.** Response at p. 3 and p. 8. In addition, Ashland also used **maleic anhydride, fumeric anhydride, and solvents at the Doremus facility**. *See* Ashland Chemical Company Doremus Avenue Report attached at Tab J. Moreover, unlike Ashland's Response for the Foundry facility, for its Doremus facility, Ashland responded that it was unknown whether 2,3,7,8 tetrachlorodibenzo-p-dioxin or other dioxin compounds were utilized. Response at p. 3.

Ashland directly discharged hazardous substances to the Passaic River from the Doremus facility. In 1970, cooling water from the Doremus facility containing copper, zinc, and chromium discharged from a drain located at the facility to the Passaic River. *See* 1970 Interstate Sanitation Commission Memorandum attached at Tab K. In addition, Ashland discharged waste waters from the Doremus facility to the sanitary sewer line. *See* Ashland Chemical Company Doremus Avenue Report, p. 5 attached at Tab J. In 1976, the sanitary sewer line ruptured and drained into the Plum Creek flume and discharged to Newark Bay. At the time of the rupture approximately 20,000 pounds of caustic wash had been discharged into the sanitary sewer. *See* Spencer Kellogg Site Evaluation Submission Report, Appendix 5, attached at Tab L. In addition, it has also been confirmed that substances spilled to the ground discharged to the Passaic River. For example, the New Jersey Department of Environmental Protection confirmed that oil spilled to the ground discharged to the Passaic River in 1977. *See*, New Jersey Department of Environmental Protection Environmental Cleanup Responsibility Act, Initial Notice attached at Tab M. *See also*, Excerpt from PVSC Bi-Monthly Report attached at Tab G.

Other pathways also existed for hazardous substances from the Doremus facility to reach the Passaic River. Soils at the Doremus facility are contaminated with hazardous substances including ethyl benzene, toluene, and other volatile organics. *See* Excerpt from Environ Corporation Cleanup Plan for Spencer Kellogg Facility attached at Tab N. Contaminated storm water from the facility would discharge to the Passaic River. In addition, Ashland's Response states that five explosions, including the explosion of a phthalic anhydride tank, occurred at the facility. Contaminated water from the fire fighting efforts during these events also likely discharged to the Passaic River.

The explosion and fire of the phthalic anhydride tank is also a significant event at the Doremus Avenue facility because of the strong potential for dioxins to be

generated under such conditions. Phthalic anhydride is a dioxin precursor. Under certain conditions, including the presence of chlorine, a dioxin precursor, and heat exceeding 200°C, dioxins are formed. The explosion and fire indicate that sufficient heat was present to cause the formation of dioxins. In addition, the presence of chlorine can be inferred by the usage, production and storage of chlorinated chemicals, including chlorinated solvents and chlorinated benzenes by Ashland at the Doremus facility. Since all the necessary conditions were met for the formation of dioxins at the Doremus facility, it is likely that dioxins were generated and emitted during the fire and explosion of the phthalic anhydride tank.

II. Ashland Should Provide Complete Answers to Agency Questions

Ashland's Response is incomplete and public documents also indicate that several responses are inaccurate. For example, Ashland denies that there were any discharges to the Passaic River from either of their facilities. However, EPA has evidence of direct discharges to the Passaic River from the Foundry facility through the Roanoke Avenue combined sewer outfall. In addition, evidence also exists of direct discharges from the Doremus facility to the Passaic River. In addition, Ashland denies that any process wastes were discharged to the Passaic River from the Foundry facility, but the documents attached at Tabs C, E, and H indicate that wastes were discharged to the sanitary sewer which was frequently bypassed to the Passaic River. EPA should confront Ashland with this information and ask Ashland to explain it.

Finally, Ashland's states in its Response that it has information on the specifications of products produced at the Doremus facility as well as more detailed information on soil analysis performed at the Foundry site (the detailed information Maxus presented in this memorandum and in the tables attached at Tab A on soil and ground water contamination was obtained from information Maxus collected and not Ashland's Response). EPA should inspect these documents or instruct Ashland to immediately forward copies of these documents to the agency.